

REMARKS

This is intended as a full and complete response to the Office Action dated October 13, 2004, having a shortened statutory period for response set to expire on January 13, 2005. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1–17 and 37-40 remain pending in the application and are shown above. Claims 1–17 and 37-40 stand rejected. Reconsideration of the rejected claims is requested for reasons presented below.

Claims 39 and 40 are amended to correct matters of form. These amendments are not presented to distinguish a reference, thus, the claims as amended are entitled to a full range of equivalents if not previously amended to distinguish a reference.

I. REJECTION OF CLAIMS UNDER 35 U.S.C. §112, FIRST PARAGRAPH.

Claims 1–17 and 37-38 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

Applicant submits that the amendments to claims 1, 9 and 17 filed on July 12, 2004 claiming a semiconductor processing apparatus for electro-chemical deposition on a semiconductor substrate do not constitute new matter under 35 U.S.C. §132 because the amendments are supported by the section entitled “BACKGROUND OF THE INVENTION” and Figure 8 of the specification. “Applicant may rely for disclosure upon the specification with original claims and drawings as filed.” *MPEP* §608. In the “BACKGROUND OF THE INVENTION” section, Applicant discusses problems encountered as circuit densities increase and states that the use of “electroplating, which had previously been limited to the fabrication of lines on circuit boards, is now being used to fill vias and contacts on semiconductor devices.” (*Kholodenko*, paragraph [0004]) Further, Figure 8 displays a semiconductor substrate placed on the contact ring (700) and thus provides support for a semiconductor substrate.

As such, Applicants’ disclosure provides support for a semiconductor processing apparatus and a semiconductor substrate in both the section entitled “BACKGROUND

OF THE INVENTION” and the Figures. Accordingly Applicant respectfully requests that the rejection of claims 1-17 and 37-38 based on 35 U.S.C. §112, paragraph 1, be withdrawn and the claims be allowed.

II. REJECTION OF CLAIMS UNDER 35 U.S.C. §103(a) – CLAIMS 1-5, 7-13, 15-17 AND 37-38.

Claims 1-5, 7-13, 15-17 and 37-38 stand rejected under 35 U.S.C. §103(a) as being unpatentable over WO 99/54920 (WO '920), in view of *Miller, et al.* (U.S. 4,801,865, issued January 31, 1989). Applicant respectfully traverses this rejection.

Applicant submits that the claimed subject matter is not motivated or suggested by the combination of WO '920 in view of *Miller, et al.* because *Miller, et al.* is neither in the field of Applicant's endeavor nor reasonably pertinent to the particular problem. “In order to rely on a reference as a basis for rejection of an Applicant's invention, the reference must either be in the field of Applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor is concerned.” *MPEP* §2141.01(a). The Applicant submits that the probe for sensing the moisture content in a porous medium such as soil disclosed by *Miller, et al.* is not “in the field of Applicants' endeavor.” Electrolytic coating processes are not in the same field of art as subject matter relating to the determination of an electrical property of the fluid in a well or borehole.

The Applicant also submits that the probe for sensing the moisture content in a porous medium such as soil disclosed by *Miller, et al.* is not “reasonably pertinent to the particular problem” faced by the present invention. The particular problem faced by the present invention is uniform power distribution during electroplating of semiconductor substrates and prevention of unwanted edge and backside deposition to minimize and control contamination of the substrate being processed. (*Kholodenko*, paragraph [0006]) The moisture probe of *Miller, et al.* is faced with the problem of providing an effective, long life moisture probe for porous media such as soil which, in the range of primary interest for turf, has significantly improved sensitivity. (*Miller, et al.*, col.1 lines 54-57) Such a problem is not “reasonably pertinent” to the particular problem with which the Applicant was involved -- increasing uniformity distribution and decreasing

contamination of a semiconductor wafer. Therefore, *Miller, et al.* does not teach or suggest any modification of WO '920 as stated by the Examiner.

Furthermore, the particular problem Applicant solves by brazing the contact pin to the conductive member is the elimination or displacement of any air or gas bubbles that may be present between adjoining surfaces in the electroplating solution. The moisture probe of *Miller, et al.* does not specifically teach brazing as a method for eliminating air bubbles, and brazing is taught as merely one of several ways of attaching a contact pin to a pad. (*Miller, et al.*, col.3 lines 6-9).

As a result, the subject matter of claims 1-5, 7-13, 15-17, and 37-38 is not motivated or suggested by combination of WO '920 in view of *Miller, et al.* Accordingly, Applicant respectfully requests withdrawal of the rejection and allowance of claims 1-5, 7-13, 15-17 and 37-38.

III. REJECTION OF CLAIMS UNDER 35 U.S.C. §103(a) – CLAIMS 6 & 14.

Claims 6 and 14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over WO '920 in view of *Miller, et al.* and further in view of *Dordi, et al.* (U.S. 6,635,157, issued October 21, 2003). Applicant respectfully traverses this rejection.

Applicant submits that the claimed subject matter is not motivated or suggested by combination of WO '920 in view of *Miller, et al.* and further in view of *Dordi, et al.* at least on the reasons described above regarding claims 1 and 9, upon which claims 6 and 14 respectively depend. Accordingly, Applicant respectfully requests withdrawal of the rejection and allowance of claims 6 and 14.

IV. REJECTION OF CLAIMS UNDER 35 U.S.C. §103(a) – CLAIMS 1-2, 7, 9-10, 15 & 17.

Claims 1-2, 7, 9-10, 15 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Crafts, et al.* (U.S. 5,807,469, issued September 15, 1998), in view of *Miller, et al.* Applicant respectfully traverses the rejection.

Applicant submits that the claimed subject matter is not motivated or suggested by combination of *Crafts, et al.* in view of *Miller, et al.* because as discussed above,

Miller, et al. is not in the field of Applicant's endeavor nor reasonably pertinent to the particular problem. Thus, Applicant respectfully requests withdrawal of the rejection and allowance of claims 1, 9 and 17, and claims 2, 7, 10 and 15 dependent thereon.

V. REJECTION OF CLAIMS UNDER 35 U.S.C. §103(a) – CLAIMS 6 & 14.

Claims 6 and 14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Dordi, et al. – Miller, et al.* combination or *Crafts, et al. – Miller, et al.* combination. Applicant respectfully traverses the rejection.

Applicants submit that claims 6 and 14 are patentable over *Dordi, et al. – Miller, et al.* combination or *Crafts, et al. – Miller, et al.* combination based at least on the traversal described above regarding claims 1 and 9, upon which claims 6 and 14 respectively depend. Accordingly, Applicant respectfully requests withdrawal of the rejection and allowance of claims 6 and 14.

VI. REJECTION OF CLAIMS UNDER 35 U.S.C. §103(a) – CLAIMS 1-17 & 37-38.

Claims 1-17 and 37-38 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Dordi, et al.*, in view of *Miller, et al.*, and further in view of WO '920.

Applicant submits that the claimed subject matter is not motivated or suggested by combination of *Dordi, et al.* in view of *Miller, et al.* and further in view of WO '920, because as discussed above, *Miller, et al.* is not in the field of Applicant's endeavor nor reasonably pertinent to the particular problem. Thus, Applicant respectfully requests withdrawal of the rejection and allowance of claims 1, 9 and 17, and claims 2-8, 10-16 and 37-38 dependent thereon.

VII. REJECTION OF CLAIMS UNDER 35 U.S.C. §103(a) – CLAIMS 39-40.

Claims 39-40 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Dordi, et al.*, in view of *Miller, et al.*


Applicant submits that the claimed subject matter is not motivated or suggested by combination of *Dordi, et al.* in view of *Miller, et al.* As discussed above *Miller, et al.* is

not in the field of Applicant's endeavor nor reasonably pertinent to the particular problem. Accordingly, *Miller, et al.* does not suggest or motivate modification of the other references. Thus, Applicant respectfully requests withdrawal of the rejection and allowance of claims 39-40.

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to the Applicant's disclosure than the primary references cited in the office action. Therefore, Applicant believes that a detailed discussion of the secondary references is not necessary for a full and complete response to this office action.

Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



Keith M. Tackett
Registration No. 32,008
MOSER, PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd. Suite 1500
Houston, TX 77056
Telephone: (713) 623-4844
Facsimile: (713) 623-4846
Attorney for Applicant(s)